SECTION .0400 - PUBLIC WATER SUPPLIES

.0401 PUBLIC WATER SUPPLY CATEGORIES

The third broad grouping of AECs includes valuable small surface water supply watersheds and public water supply well fields.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a; 113A-124;

Eff. September 9, 1977.

15A NCAC 07H .0402 SIGNIFICANCE

- (a) These vulnerable, critical water supplies, if degraded, could adversely affect public health or require substantial monetary outlays by affected communities for alternative water source development.
- (b) Uncontrolled development within the designated boundaries of a watershed or well field site could cause significant changes in runoff patterns or water withdrawal rates that may adversely affect the quantity and quality of the raw water supply. Also, incompatible development could adversely affect water quality by introducing a wide variety of pollutants from homes, businesses, or industries, either through subsurface discharge, surface runoff, or seepage into the vulnerable water supply.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a; 113A-124;

Eff. September 9, 1977.

15A NCAC 07H .0403 MANAGEMENT OBJECTIVE FOR PUBLIC WATER SUPPLIES

The CRC objective in regulating development within critical water supply areas is the protection and preservation of public water supply well fields and A-II streams and to coordinate and establish a management system capable of maintaining public water supplies so as to perpetuate their values to the public health, safety, and welfare.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a; 113A-124;

Eff. September 9, 1977.

15A NCAC 07H .0404 AECS WITHIN PUBLIC WATER SUPPLIES

Public water supplies as a broad category include two AECs: small surface water supply watersheds and public water supply well fields. The following discussion includes the description and the land use standards for each. Maps of these AECs are available at the CRC and the appropriate local minor development permit office.

Note: Rules .0405 and .0406 of this Subchapter contain descriptions of four public water supply areas as identified by the North Carolina Department of Environment, Health, and Natural Resources, Division of Environmental Health.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a; 113A-124;

Eff. September 9, 1977;

Amended Eff. May 1, 1990; November 1, 1984; January 24, 1978.

15A NCAC 07H .0405 SMALL SURFACE WATER SUPPLY WATERSHEDS

- (a) Description. These are catchment areas situated entirely within the coastal area which contain a water body classified as A-II by the Environmental Management Commission. This means the maximum beneficial use of these bodies of water is to serve as public water supply areas. The watershed of the A-II water bodies has been identified by the North Carolina Department of Environment, Health, and Natural Resources for designation by the CRC.
- (b) Use Standards. The CRC or local designated official shall approve an application upon finding that the project is in accord with the following minimum standards:

- Ground absorption sewage disposal systems shall be located a minimum of 100 feet from A-II surface waters.
- (2) Development requiring a national pollution discharge elimination system (NPDES) permit will be denied an AEC permit until the NPDES permit is secured.
- (3) Land-disturbing activities (land clearing, grading, and surfacing) shall be in compliance with the mandatory standards of the North Carolina Sedimentation Pollution Control Act of 1973 in G.S. 113A-57.
- (4) In instances where a detailed hydrologic study of a small surface water supply watershed has been made, more detailed standards may be applied.
- (c) Designated Small Surface Water Supply Watersheds. The CRC has designated the following small surface water supply watersheds and developed detailed standards as set out in this Paragraph:
 - (1) The fresh pond between Kill Devil Hills and Nags Head on Bodie Island and adjacent catchment area. The Department of Environment, Health, and Natural Resources proposed the fresh water lake on Bodie Island in Dare County as an area of environmental concern.
 - (A) Both the towns of Nags Head and Kill Devil Hills have water treatment plants which take their raw water from the fresh water lake located between the two towns on Bodie Island. The lake is approximately one-quarter mile west of the U.S. 158 bypass. This fresh water lake is supplied by groundwater from the surrounding landmass and rainfall.
 - (B) This area is near the Cape Hatteras National Seashore Recreation Area. In addition, Kill Devil Hills is the site of the Wright Brothers Memorial, a national monument. As a major tourist attraction this area draws people from across the east coast. Contamination of the water supply could, therefore, have an effect not only on other areas of the state but the east coast as well.
 - (C) To adequately protect the fresh pond, it is necessary that construction of septic tanks and other sources of pollution within the limits of the cone of depression be regulated as follows:
 - (i) Within 500 feet, horizontal distance of the edge of the pond, no construction of sewers, septic tanks nitrification fields or other possible sources of pollution shall be permitted.
 - (ii) Between the distances of 500 feet and 1200 feet from the edge of the pond, construction of septic tank systems shall be limited to one single septic tank system serving a single family residence not to exceed four bedrooms or its equivalent volume of sewage, on a lot or tract of land not less than 40,000 square feet.
 - (2) The Toomers Creek Watershed. The Department of Environment, Health, and Natural Resources proposed the Toomers Creek at Wilmington in New Hanover County as an area of environmental concern. Toomers Creek is a tributary to the Cape Fear River and is classified as Class A-II swamp waters suitable as a source of water supply for drinking, culinary, or food processing purposes after approved treatment equal to coagulation, sedimentation, filtration, and disinfection, etc., and any other usage requiring waters of lower quality. Toomers Creek is utilized by the City of Wilmington as an auxiliary supply of raw water for drinking purposes.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a; 113A-124; Eff. September 9, 1977; Amended Eff. May 1, 1990; September 1, 1988; November 1, 1984; February 18, 1980.

15A NCAC 07H .0406 PUBLIC WATER SUPPLY WELL FIELDS

- (a) Description. Public water supply well fields are areas of well-drained sands that extend downward from the surface into the shallow ground water table which supplies the public with potable water. These surficial well fields are confined to a readily definable geographic area as identified by the North Carolina Department of Environment and Natural Resources with assistance and support from affected local governments.
- (b) Use Standards. Development within these AEC's shall be consistent with the following minimum standards:
 - (1) No ground absorption sewage disposal or subsurface pollution injection systems shall be placed within the designated AEC boundary except to replace systems existing as of July 24, 1987;
 - (2) Development shall not significantly limit the quality or quantity of the public water supply or the amount of rechargeable water;
 - (3) The development shall not cause salt water intrusion or result in the discharge of toxic or soluble contaminants into standing or groundwater; and

- (4) Groundwater absorption sewage treatment systems may also be used within the AEC boundary if each of the following provisions are met:
 - (A) the system is serving development on a lot that was platted of record as of July 24, 1987;
 - (B) there is no other economically viable method of waste treatment for the permittable development of such lot;
 - (C) there is no space outside the boundaries of the AEC on the lot upon which the treatment system could be located; and
 - (D) the Division of Environmental Health, Department of Environment and Natural Resources, prior to the CAMA permit decision, reviews and approves the proposed system as complying with existing rules.
- (c) Designated public water supply well field. The CRC has designated the following as a public water supply well field which shall be subject to the use standards as set out in Paragraph (b) of this Rule:
 - (1) Cape Hatteras Well Field. The County of Dare is supplied with raw water from a well field located south of N.C. 12 on Hatteras Island between Frisco and Buxton. The area of environmental concern is bounded by a line located 1,000 feet from the centerlines of three tracts. The first tract is identified as "well field" on maps entitled "Cape Hatteras Wellfield Area of Environmental Concern" approved by the Coastal Resources Commission on July 24, 1987, and extends approximately 12,000 feet west from Water Association Road. The second tract is conterminous with the first tract, is identified as "future well field" on said maps and extends approximately 8,000 feet to the east of Water Association Road. The third tract is identified as "future well field" on said maps and extends approximately 6,200 feet along the National Park Service boundary east of Water Association Road. The aquifer beneath the tracts serves as the sole source of drinking water for the communities of Avon, Buxton, Frisco, and Hatteras as well as the national seashore recreation area. The wetlands, swales, and surface waters adjacent to the well field provide a large source of recharge and are a potential vehicle for contaminants. Due to these facts contamination of the water supply could have an adverse effect on people other than the local residents of Hatteras Island. Water-borne disease organisms could be easily transported to other areas of the state or the east coast by tourists who are attracted to the area daily.

History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(3)a.; 113A-124; Eff. September 9, 1977; Amended Eff. December 1, 1997; April 1, 1995; May 1, 1990; October 1, 1987; November 1, 1984.